

**REMARKS**

Claims 1-10 are all the claims pending in the application.

Claim 9 has been rejected for obviousness-type double patenting as allegedly being unpatentable over Claim 1 of U.S. Patent No. 6,323,147.

As explained in the previous Response filed October 14, 2009, present Claim 9 is not obvious over Claim 1 of the '147 patent at least for the reason that the third step of present Claim 1 is not taught or suggested by Claim 1 of the '147 patent. The significance of this step with respect to the teachings of the '147 patent is discussed in more detail below. Accordingly, withdrawal of the double patenting rejection based on the '147 patent is respectfully requested.

Claims 1-10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto et al. (US 6,323,147).

Applicant submits that this rejection should be withdrawn because Yamamoto et al. does not disclose or render obvious the present claimed invention.

In connection with the second step of the presently claimed process, the Examiner asserts that toluene is taught as a washing solvent in Example 1 of Yamamoto et al.

However, Yamamoto et al. teaches, in Example 1 at col. 7, lines 40-50, that the filtered white solid obtained after removal of the templates by extraction with a mixed solution of hydrochloric acid/ethanol was transferred to a tubular furnace and heated at 150 °C for five hours under nitrogen flow; then this substance, hexamethyldisilazane and toluene were mixed, and the mixture was heated for 1 hour under reflux with stirring. Therefore, the presently claimed solvent substitution procedure (third step) is not employed in Yamamoto et al.'s process, and it took as long as five hours to remove the extraction solvent before the silylation step in Yamamoto et al.

In contrast, in the presently claimed process, the solid after removal of a template was successively washed with a solvent that is substantially inert to the silylating agent, such as toluene, and substitution of the solvent is accomplished as short as an hour and 40 minutes (e.g., Example 1 at page 20 of the specification). It is also noted that the obtained catalyst after silylation showed improved reactivity when used to produce propylene oxide (PO) from propylene (C<sub>3</sub>) and cumene hydroperoxide. The results are shown in Table 1 at page 21 of the specification.

Specifically, in the presently claimed process (Example 1), the selectivity of PO/C<sub>3</sub>' is 99.1% while that shown by the catalyst treated under the nitrogen atmosphere was 98.7% in the Comparative Example 1, which is representative of Yamamoto et al. The difference of 0.4% between the two values seems modest at a glance. However, on an industrial scale of production, PO is reportedly produced around 3 million tons or so each year across the world, and at least 0.3 million may be produced at one PO production site. Taking into account such large industrial scale production, it can be properly said that 0.4% of improvement equals to 12,000 tons across the world or 1,200 tons at one large production site. Such improvements contribute to save resources and Applicants submit are unexpected for one skilled in the art.

That is, the titanium-containing silicon oxide catalyst obtained by the presently claimed process exhibits unexpectedly higher activity than that of Yamamoto et al.

In view of the above, the present claims are not obvious and are patentable over Yamamoto et al. Reconsideration and withdrawal of the §103(a) rejection based on Yamamoto et al. are respectfully requested.

Allowance is respectfully requested. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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